CURRICULUM VITAE

Patrik Simic

Personal Data

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Education
Master's degree in mathematics and computer science,
Faculty of Natural Sciences and Mathematics,
Mathematics department, University of Zagreb, Croatia,

Work experience

PSPDFKit   www.pspdfkit.com (rebranded as [Nutrient](http://nutrient.io))
• period: August 2022 - October 2023
• job description: senior software developer/software group lead
• responsibilities: full remote software development

                    Leading a small team responsible for implementing the
                    Windows App SDK and MAUI (on Windows and MacOS) part of
                    the main company product (PDF management library) using
                    C#, C++, React (JavaScript) and Webassembly with tools:
                    Github, WSL, BuildKite, Terraform, Slack, Notion ...

Fix8 Market Tech   www.fix8mt.com
• period: April 2020 - July 2022
• job description: senior software developer
• responsibilities: full remote software development (the company is located
                    in Australia) using Vue.js, Gridsome (JavaScript) and
                    Django (Python) with tools: Github, Docker, CicleCI,
                    Slack ...

                    Implementation of a configuration editor for the
                    company's existing FIX engine

                    Rewrite of the company website from a single page
                    application to a statically generated site using
                    Gridsome framework with GraphQL

                    Implementation of various search engine optimizations
                    using Amazon services (S3 and CloudFront)

nemase.com	www.nemase.com

- period: June 2016 - December 2019
- job description: senior software developer
- responsibilities: software development using Vue.js (JavaScript) and Rust

Implementation of a survey engine using Vue.js for frontend and Rust for backend

Using [probabilistic graphical models](#) (bayesian networks) to implement AI capabilities of the survey engine

Altova	www.altova.com

- period: July 2003 - November 2015
- job description: senior software developer/software group lead
- responsibilities: software development in MS VC++ 2010, 2008 and 6.0 using MFC, [Scintilla](#) and [ANTLR](#) software development using Scala

Implementation of advanced text editor and text control for all Altova's products (XmlSpy, MapForce, uModel, StyleVision, DiffDog, SemanticWorks etc.) based on scintilla with autocompletion support for various languages (XML, XQquery, HTML, CSS etc.)

Implementation of Java parsers for uModel application based on ANTLR, as well as parsers for several dialects of SQL for DatabaseSpy application based on modified ANTLR engine

Implementation of charting library, XBRL editor and parts of XML schema validator
Customization of Clang front-end for parsing MSVC runtime C++ code

Implementation of low level data structures for MobileTogether set of applications

Implementation of MobileTogether server using C++, Python, Cython and CherryPy

Implementation of web client for MobileTogether application - generating JavaScript and HTML using jQuery and jQuery mobile libraries

Professional skills

- excellent working knowledge in programming on Windows and Linux (Fedora, Arch, Ubuntu, NixOS) using Rust and C++ programming languages
- very good working knowledge in web frontend programming using Svelte(Kit), Vue.js and React
- knowledge of Scintilla, ANTLR and Clang open source projects
- experience with concurrent programming using C++, Rust, Scala and Erlang/Elixir - name of my master's thesis was "Actor model of concurrent computation" where I implemented a small actor library in C++)
- interest in compiler front-end development and code generation in combination with intellisense solutions
- special personal interest in functional programming – Ocaml, Haskell and Common LISP programming languages, as well as certain fields in mathematics (Abstract Algebra, Number Theory and Graph Theory)

Foreign languages

- English language: fluent (written and spoken)
- German language: fluent (written and spoken)
- Spanish language: basic grasp

Certificates / Courses / Conferences

- [Euro Rust 2024](), October 10 2024, Vienna, Austria
- [Euro Rust 2024 – Testing in Rust Workshop](), October 9 2024, Vienna, Austria
- [Lambda Days](),February 22 2018, Krakow Poland
- [International Conference on Functional Programming – Workshop on Type-Driven Development](), 2017, Oxford, UK
  [EuroClojure 2012](), May 21 2012, London, UK
- [European Common Lisp Meeting](), September 13 2009, Hamburg, Germany
- [European Ruby Conference](), March 29-30 2008, Prague, Czech Republic
- [International Lisp Conference 2007](), June 19-22 2005, Cambridge,UK
- [European Common Lisp Meeting](), April 30 2006, Hamburg, Germany
- [European Joint Conferences on Theory and Practice of Software](), March 25 - April 2 2006, Vienna, Austria
- [International Lisp Conference 2005](), June 19-22 2005, Stanford University, USA
- [European Common Lisp Meeting](), April 24 2005, Amsterdam, Netherlands
- [Working Conference on Generic Programming](), July 2002, [Dagstuhl](), Germany
- [International Conference On Functional Programming, Haskell Workshop](), September 2001, Florence, Italy